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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,268	06/21/2000	YASUNORI OGAWA	106187	6416

25944 7590 09/09/2003

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EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT PAPER NUMBER

2871

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/598,268

Applicant(s)

OGAWA ET AL.

Examiner

Prasad R Akkapeddi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/16/2003 has been entered.

Claim Objections

2. Claims 1 and 7 are objected to because of the following informalities: The newly added limitation recites that "the exit side polarizer spaced apart from the exit side cover" as shown in Fig. 1. It is not clear how the polarizer can be spaced apart and stay attached to the liquid crystal display without some kind of a holding fixture or a frame. No holding fixture or a frame is either shown or described in the instant application. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka (previously cited) (U.S. Patent No. 5,835,179) in view of Kanatani et al. (Kanatani) (U.S. Patent No. 5,854,665).

As to claims 1-4 and 7-10: Although Yamanaka discloses a liquid crystal display that comprises all the limitations cited in the instant claims 1 and 7 (see the Office Action dated March 11, 2002). In addition Yamanaka discloses that the absolute value of the coefficient of the thermal expansion of the exit side cover (G2) is 6×10^{-7} (silica glass) which satisfies the limitation of not more than 10×10^{-7} /degrees Centigrade, as recited in instant claims 2 and 8. The entrance side coefficient of thermal expansion being 6×10^{-7} , which satisfies the limitation of less than 37×10^{-7} (Col. 2, lines 61-63) and not more than 10×10^{-7} /degrees Centigrade, as recited in instant claims 3-4 and 9-10.

Yamanaka however, does not disclose the newly cited limitation in the amendment dated 06/16/2003, i.e., exit side polarizer spaced apart from the exit side cover. (Note: It is not clear how the polarizers can stay spaced apart from the liquid crystal display without some kind of a holding fixture or a frame. No holding fixture or a frame is either shown or described).

Kanatani on the other hand, in disclosing a liquid crystal projector, discloses that the exit side polarizer (6) is spaced apart from the exit side of the liquid crystal display unit (8) (Fig.1), but attached to a holding fixture. The liquid crystal display unit (8) has a liquid crystal panel (2) and Kanatani does not describe the construction of the unit (8), except to say that such a construction is

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known (col. 2, lines 54-55). Hence, a conventional liquid crystal display unit will have an exit side cover as disclosed by Yamanaka.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the exit side polarizer (6) spaced apart from the exit side cover of the liquid crystal display unit for better thermal management using a cooler of the heat pipe type containing a refrigerant (col. 2, lines 10-12).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

RP

August 25, 2003

ROBERT H. KIM
SUPERVISOR/PATENT EXAMINER
TECHNICAL CENTER 1000